

## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION  
(PCT Rule 61.2)

To:

United States Patent and Trademark  
Office  
(Box PCT)  
Crystal Plaza 2  
Washington, DC 20231  
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 02 March 1999 (02.03.99)	To: United States Patent and Trademark Office (Box PCT) Crystal Plaza 2 Washington, DC 20231 ÉTATS-UNIS D'AMÉRIQUE in its capacity as elected Office
International application No. PCT/US98/15229	Applicant's or agent's file reference AD6516
International filing date (day/month/year) 23 July 1998 (23.07.98)	Priority date (day/month/year) 25 July 1997 (25.07.97)
Applicant GARCIA DURAN, Juan-Antonio et al	

## 1. The designated Office is hereby notified of its election made:

 in the demand filed with the International Preliminary Examining Authority on:

27 January 1999 (27.01.99)

 in a notice effecting later election filed with the International Bureau on:2. The election  was was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Lazar Joseph Panakal Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

RECEIVED

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

SEP 20 1999

PCT PATENT RECORDS  
CENTER

NOTIFICATION OF TRANSMITTAL OF  
INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing  
(day/month/year)

15 SEP 1999

Applicant's or agent's file reference

AD6516

IMPORTANT NOTIFICATION

International application No.

PCT/US98/15229

International filing date (day/month/year)

23 JULY 1998

Priority Date (day/month/year)

25 JULY 1997

Applicant

E. I. DU PONT DE NEMOURS AND COMPANY

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231  
Facsimile No. (703) 305-3230

Authorized officer

MARK WARZEL  
*b. warzel*

Telephone No. (703) 308-0661

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
**(PCT Article 36 and Rule 70)**

Applicant's or agent's file reference  AD6516	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No.  PCT/US98/15229	International filing date (day/month/year)  23 JULY 1998	Priority date (day/month/year)  25 JULY 1997
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant E. I. DU PONT DE NEMOURS AND COMPANY		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>0</u> sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step or industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>
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Date of submission of the demand  27 JANUARY 1999	Date of completion of this report  30 JULY 1999
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer   MARK WARZEL
Facsimile No. (703) 305-3236	Telephone No. (703) 308-0661

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/15229

## I. Basis of the report

1. This report has been drawn on the basis of (Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):

the international application as originally filed.

the description, pages 1-8 , as originally filed.

pages NONE , filed with the demand.

pages NONE , filed with the letter of \_\_\_\_\_

pages \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

the claims, Nos. 1-6 , as originally filed.

Nos. NONE , as amended under Article 19.

Nos. NONE , filed with the demand.

Nos. NONE , filed with the letter of \_\_\_\_\_

Nos. \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

the drawings, sheets/fig None , as originally filed.

sheets/fig NONE , filed with the demand.

sheets/fig NONE , filed with the letter of \_\_\_\_\_

sheets/fig \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

2. The amendments have resulted in the cancellation of:

the description, pages NONE .

the claims, Nos. NONE .

the drawings, sheets/fig NONE .

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/15229

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-6</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-6</u>	NO
Industrial Applicability (IA)	Claims <u>1-6</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-6 lack an inventive step under PCT Article 33(3) as being obvious over Hwang et al. (US 5,424,362) in combination with the status of the art, as evidenced by Forry et al. (US 5,276,082).

Hwang et al. discloses polyolefin compositions comprising (A) at least one polypropylene or graft-modified polypropylene, (B) 0 to about 40 percent of at least one nongrafted or graft-modified substantially linear ethylene polymer and (C) 0 to about 50 percent of an interpolymer of ethylene and an unsaturated carbonyl compound.

The linear ethylene polymer is within the scope of the claims since the density is typically within the range of between about 0.85 to about 0.92 g/cm<sup>3</sup> and it may be grafted with a carboxylic acid or anhydride such as maleic anhydride. The combination of graft-modified and ungrafted linear ethylene polymer is also disclosed since the graft-modified polymer may be diluted with ungrafted polymer (e.g. col. 6, lines 46-58).

The ethylene interpolymer is a copolymer or terpolymer of ethylene and additional comonomers such as vinyl acetate and carbon monoxide (e.g., col. 5, lines 15-46). Hwang does not specifically disclose a terpolymer of ethylene, vinyl acetate and carbon monoxide, however, both ethylene/ vinyl acetate and ethylene/carbon monoxide copolymers are disclosed. Coupled with the disclosure that ethylene terpolymers are intended to be utilized it would be expected that such ethylene/vinyl acetate/carbon monoxide terpolymers would function as equivalents for the disclosed copolymers.

The claims therefore lack an inventive step over Hwang et al. (US 5,424,362) since the combination of the claimed ethylene polymer, grafted ethylene polymer and ethylene/vinyl acetate/carbon monoxide terpolymer is suggested.

Hwang et al. does not specifically disclose the addition of fillers such as aluminum trihydrate and calcined clay according to the claims. However, the claims lack an inventive step over Hwang et al. and the status of the art since each of these fillers is recognized in the art to provide useful properties to molding compositions. For example, aluminum trihydrate is known to be useful to modify composition processing characteristics and provide fire resistance in molding compositions. Calcined clays are also known to be conventional fillers which provide reinforcement and indentation resistance while allowing for a reasonable amount of flexibility. Forry et al. furthermore disclose that it is known in the art to utilize fillers such as alumina trihydrate and calcined clays for such reasons (e.g. col. 8, lines 6-42), particularly in compositions comprising ethylene/vinyl acetate/carbon monoxide terpolymers (col. 6, line 62 to col. 7, line 4), EVA and/or polyolefins according to the instant invention.

Claims 1-6 meet the requirement of industrial applicability as defined by PCT Article 33(4) since the composition is useful to prepare shaped articles such as for wire and cable coatings and floor tiles.

The argument that the present invention does not contain polypropylene or a nongrafted or graft-modified substantially linear ethylene polymer and an interpolymer of ethylene and an unsaturated carbonyl compound according to Hwang's invention is not persuasive since none of these components are excluded from the claimed (Continued on Supplemental Sheet.)

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/15229

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**CLASSIFICATION:**

The International Patent Classification (IPC) and/or the National classification are as listed below:

IPC(6): C08L 51/06; C08K 3/00, 3/26, 3/32 and US Cl.: 524/504, 524, 531, 400, 416, 425, 444, 445, 451

**V. 2. REASoNED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):**

invention. In addition, Hwang's interpolymer of ethylene and an unsaturated carbonyl compound is considered to suggest the use of the claimed ethylene/vinyl acetate/carbon monoxide terpolymer of the claims and the grafted linear ethylene polymer meets the limitations of the claimed component (3).

The argument that the present invention does not specifically refer to an ethylene/vinyl acetate/carbon monoxide (EVACO) terpolymer is not persuasive since the disclosure of EVA and ECO copolymers coupled with the disclosure that terpolymers which may comprise ethylene, vinyl acetate and/or carbon monoxide may be present is sufficient to suggest to one of ordinary skill in the art that EVACO terpolymers are intended to be within the group of terpolymers which may be present.

The argument that there is no disclosure of the same problem addressed by the present invention is not persuasive since the same problem and solution need not be disclosed by a particular reference in order for the claimed invention to lack an inventive step.

The argument that there is no suggestion to utilize the specific claimed fillers is not persuasive since the addition of clays and alumina trihydrate are known in the art to provide particular benefits to polymer compositions, as evidenced by Forry et al., such that their presence would be expected to add these characteristics to the composition of Hwang et al.

**----- NEW CITATIONS -----**

NONE

PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

RECEIVED

PCT

WRITTEN OPINION

(PCT Rule 66)

To: PATRICIA L. KELLY  
E. I. DU PONT DE NEMOURS AND COMPANY  
LEGAL PATENT RECORDS CENTER  
1007 MARKET STREET  
WILMINGTON, DE 19898

MAY 06, 1999

3 1999

PATENT RECORDS  
CENTER

Date of Mailing  
(day/month/year)

28 APR 1999

Applicant's or agent's file reference AD6516		REPLY DUE within <b>TWO</b> months from the above date of mailing
International application No. PCT/US98/15229	International filing date (day/month/year) 23 JULY 1998	Priority date (day/month/year) 25 JULY 1997
International Patent Classification (IPC) or both national classification and IPC Please See Supplemental Sheet.		
Applicant E. I. DU PONT DE NEMOURS AND COMPANY		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I  Basis of the opinion
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.
 

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 25 NOVEMBER 1999

Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer MARK WARZEL Telephone No. (703) 308-0661	BRIAN A. HARDEN PARALEGAL SPECIALIST GROUP 1700 for
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## WRITTEN OPINION

International application No.

PCT/US98/15229

## I. Basis of the opinion

1. This opinion has been drawn on the basis of (Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".):

the international application as originally filed.

the description, pages 1-8, as originally filed.  
pages NONE, filed with the demand.  
pages NONE, filed with the letter of \_\_\_\_\_

the claims, Nos. 1-6, as originally filed.  
Nos. NONE, as amended under Article 19.  
Nos. NONE, filed with the demand.  
Nos. NONE, filed with the letter of \_\_\_\_\_

the drawings, sheets/fig None, as originally filed.  
sheets/fig NONE, filed with the demand.  
sheets/fig NONE, filed with the letter of \_\_\_\_\_

2. The amendments have resulted in the cancellation of:

the description, pages NONE

the claims, Nos. NONE

the drawings, sheets/fig NONE

3.  This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the **Supplemental Box** Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

## WRITTEN OPINION

International application No.

PCT/US98/15229

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-6</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-6</u>	NO
Industrial Applicability (IA)	Claims <u>1-6</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-6 lack an inventive step under PCT Article 33(3) as being obvious over Hwang et al. (US 5,424,362) in combination with the status of the art.

Hwang et al. discloses polyolefin compositions comprising (A) at least one polypropylene or graft-modified polypropylene, (B) 0 to about 40 percent of at least one nongrafted or graft-modified substantially linear ethylene polymer and (C) 0 to about 50 percent of an interpolymer of ethylene and an unsaturated carbonyl compound.

The linear ethylene polymer is within the scope of the claims since the density is typically within the range of between about 0.85 to about 0.92 g/cm<sup>3</sup> and it may be grafted with a carboxylic acid or anhydride such as maleic anhydride. The combination of graft-modified and ungrafted linear ethylene polymer is also disclosed since the graft-modified polymer may be diluted with ungrafted polymer (e.g. col. 6, lines 46-58).

The ethylene interpolymer is a copolymer or terpolymer of ethylene and additional comonomers such as vinyl acetate and carbon monoxide (e.g. col. 5, lines 15-46). Hwang does not specifically disclose a terpolymer of ethylene, vinyl acetate and carbon monoxide, however, both ethylene/ vinyl acetate and ethylene/carbon monoxide copolymers are disclosed. Coupled with the disclosure that ethylene terpolymers are intended to be utilized it would be expected that such ethylene/vinyl acetate/carbon monoxide terpolymers would function as equivalents for the disclosed copolymers.

The claims therefore lack an inventive step over Hwang et al. (US 5,424,362) since the combination of the claimed ethylene polymer, grafted ethylene polymer and ethylene/vinyl acetate/carbon monoxide terpolymer is suggested.

Hwang et al. does not specifically disclose the addition of fillers such as aluminum trihydrate and calcined clay according to the claims. However, the claims lack an inventive step over Hwang et al. and the status of the art since each of these fillers is recognized in the art to provide useful properties to molding compositions. For example, aluminum trihydrate is known to be useful to modify composition processing characteristics and provide fire resistance in molding compositions. Calcined clays are also known to be conventional fillers which provide reinforcement and indentation resistance while allowing for a reasonable amount of flexibility.

Claims 1-6 meet the requirement of industrial applicability as defined by PCT Article 33(4) since the composition is useful to prepare shaped articles such as for wire and cable coatings and floor tiles.

## ----- NEW CITATIONS -----

NONE

WRITTEN OPINION

International application No.

PCT/US98/15229

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**CLASSIFICATION:**

The International Patent Classification (IPC) and/or the National classification are as listed below:  
IPC(6): CO8L 51/06; CO8K 3/00, 3/26, 3/32 and US Cl.: 524/504, 524, 531, 400, 416, 425, 444, 445, 451

## PATENT COOPERATION TREATY

PCT

REC'D 20 SEP 1999

WIPO PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference AD6516	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US98/15229	International filing date (day/month/year) 23 JULY 1998	Priority date (day/month/year) 25 JULY 1997
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant E. I. DU PONT DE NEMOURS AND COMPANY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

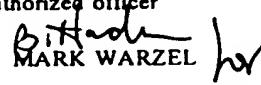
2. This REPORT consists of a total of 4 sheets.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 27 JANUARY 1999	Date of completion of this report 30 JULY 1999
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer  MARK WARZEL Telephone No. (703) 308-0661
Facsimile No. (703) 305-3230	

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/15229

## I. Basis of the report

1. This report has been drawn on the basis of (Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):

the international application as originally filed.

the description, pages 1-8 \_\_\_\_\_, as originally filed.

pages NONE \_\_\_\_\_, filed with the demand.

pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

pages        \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

the claims, Nos. 1-6 \_\_\_\_\_, as originally filed.

Nos. NONE \_\_\_\_\_, as amended under Article 19.

Nos. NONE \_\_\_\_\_, filed with the demand.

Nos. NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

Nos.        \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

the drawings, sheets/fig None \_\_\_\_\_, as originally filed.

sheets/fig NONE \_\_\_\_\_, filed with the demand.

sheets/fig NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

sheets/fig        \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

the description, pages NONE \_\_\_\_\_.

the claims, Nos. NONE \_\_\_\_\_.

the drawings, sheets/fig NONE \_\_\_\_\_.

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/15229

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims 1-6	YES
	Claims NONE	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-6	NO
Industrial Applicability (IA)	Claims 1-6	YES
	Claims NONE	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-6 lack an inventive step under PCT Article 33(3) as being obvious over Hwang et al. (US 5,424,362) in combination with the status of the art, as evidenced by Forry et al. (US 5,276,082).

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The linear ethylene polymer is within the scope of the claims since the density is typically within the range of between about 0.85 to about 0.92 g/cm<sup>3</sup> and it may be grafted with a carboxylic acid or anhydride such as maleic anhydride. The combination of graft-modified and ungrafted linear ethylene polymer is also disclosed since the graft-modified polymer may be diluted with ungrafted polymer (e.g. col. 6, lines 46-58).

The ethylene interpolymer is a copolymer or terpolymer of ethylene and additional comonomers such as vinyl acetate and carbon monoxide (e.g., col. 5, lines 15-46). Hwang does not specifically disclose a terpolymer of ethylene, vinyl acetate and carbon monoxide, however, both ethylene/ vinyl acetate and ethylene/carbon monoxide copolymers are disclosed. Coupled with the disclosure that ethylene terpolymers are intended to be utilized it would be expected that such ethylene/vinyl acetate/carbon monoxide terpolymers would function as equivalents for the disclosed copolymers.

The claims therefore lack an inventive step over Hwang et al. (US 5,424,362) since the combination of the claimed ethylene polymer, grafted ethylene polymer and ethylene/vinyl acetate/carbon monoxide terpolymer is suggested.

Hwang et al. does not specifically disclose the addition of fillers such as aluminum trihydrate and calcined clay according to the claims. However, the claims lack an inventive step over Hwang et al. and the status of the art since each of these fillers is recognized in the art to provide useful properties to molding compositions. For example, aluminum trihydrate is known to be useful to modify composition processing characteristics and provide fire resistance in molding compositions. Calcined clays are also known to be conventional fillers which provide reinforcement and indentation resistance while allowing for a reasonable amount of flexibility. Forry et al. furthermore disclose that it is known in the art to utilize fillers such as alumina trihydrate and calcined clays for such reasons (e.g. col. 8, lines 6-42), particularly in compositions comprising ethylene/vinyl acetate/carbon monoxide terpolymers (col. 6, line 62 to col. 7, line 4), EVA and/or polyolefins according to the instant invention.

Claims 1-6 meet the requirement of industrial applicability as defined by PCT Article 33(4) since the composition is useful to prepare shaped articles such as for wire and cable coatings and floor tiles.

The argument that the present invention does not contain polypropylene or a nongrafted or graft-modified substantially linear ethylene polymer and an interpolymer of ethylene and an unsaturated carbonyl compound according to Hwang's invention is not persuasive since none of these components are excluded from the claimed (Continued on Supplemental Sheet.)

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of Boxes I - VIII

Sheet 10

**CLASSIFICATION:**

The International Patent Classification (IPC) and/or the National classification are as listed below:  
IPC(6): C08L 51/06; C08K 3/00, 3/26, 3/32 and US Cl.: 524/504, 524, 531, 400, 416, 425, 444, 445, 451

**V. 2. REASoNED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):**

invention. In addition, Hwang's interpolymer of ethylene and an unsaturated carbonyl compound is considered to suggest the use of the claimed ethylene/vinyl acetate/carbon monoxide terpolymer of the claims and the grafted linear ethylene polymer meets the limitations of the claimed component (3).

The argument that the present invention does not specifically refer to an ethylene/vinyl acetate/carbon monoxide (EVACO) terpolymer is not persuasive since the disclosure of EVA and ECO copolymers coupled with the disclosure that terpolymers which may comprise ethylene, vinyl acetate and/or carbon monoxide may be present is sufficient to suggest to one of ordinary skill in the art that EVACO terpolymers are intended to be within the group of terpolymers which may be present.

The argument that there is no disclosure of the same problem addressed by the present invention is not persuasive since the same problem and solution need not be disclosed by a particular reference in order for the claimed invention to lack an inventive step.

The argument that there is no suggestion to utilize the specific claimed fillers is not persuasive since the addition of clays and alumina trihydrate are known in the art to provide particular benefits to polymer compositions, as evidenced by Forry et al., such that their presence would be expected to add these characteristics to the composition of Hwang et al.

**----- NEW CITATIONS -----**

NONE

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference AD6516	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US98/15229	International filing date (day/month/year) 23 JULY 1998	(Earliest) Priority Date 25 JULY 1997
Applicant E. I. DU PONT DE NEMOURS AND COMPANY		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1.  Certain claims were found unsearchable (See Box I).
2.  Unity of invention is lacking (See Box II).
3.  The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing
  - filed with the international application.
  - furnished by the applicant separately from the international application,
    - but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
    - transcribed by this Authority.
4. With regard to the title,  the text is approved as submitted by the applicant.  
 the text has been established by this Authority to read as follows:  
**FLAME RETARDANT POLYOLEFIN COMPOSITIONS**

5. With regard to the abstract,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:

Figure No. \_\_\_\_\_

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.
- None of the figures.

430

09/462971  
'd PCT/PTO 14 JAN 2000

Date: 23 JULY 1998

Docket No.: AD6516

TRANSMITTAL LETTER TO THE  
UNITED STATES RECEIVING OFFICE

## I. Certification under 37 CFR 1.10 (if applicable):

EH737538477US	23 JULY 1998
Express Mail mailing number	Date of Deposit

I hereby certify that the application/correspondence attached hereto is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Asst. Commissioner for Patents, Box PCT, Washington, DC 20231.

<i>Jane E. Clark</i> Signature of person mailing correspondence	JANE E. CLARK Typed or printed name of person mailing correspondence
--	---

II.  New International Application

POLYOLEFIN COMPOSITIONS	25 JULY 1997
TITLE	Earliest priority date (Day/Month/Year)

SCREENING DISCLOSURE INFORMATION: In order to assist in screening the accompanying international application for purposes of determining whether a license for foreign transmittal should and could be granted and for other purposes, the following information is supplied. (Note: check as many boxes as apply):

- A.  The invention disclosed was not made in the United States.
- B.  There is no prior U.S. application relating to this invention
- C.  The following prior U.S. application(s) contain subject matter which is related to the invention disclosed in the attached international application. (Note: priority to these applications may or may not be claimed on form PCT/RO/101 (Request) and this listing does not constitute a claim for priority.)

The present international application is identical to Application No. EP 97 20 2335.2 filed on 25 JULY 1997.

The person signing this form is	
	KELLY, Patricia L.
<input type="checkbox"/> Applicant	Typed name of signer
<input checked="" type="checkbox"/> Attorney/Agent (Reg. No.: 39,247)	
<input type="checkbox"/> Common Representative	
	<i>Patricia L. Kelly</i> Signature

PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) AD6516

**Box No. I TITLE OF INVENTION**  
**POLYOLEFIN COMPOSITIONS**
**Box No. II APPLICANT**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

E.I. DU PONT DE NEMOURS AND COMPANY  
 1007 MARKET STREET  
 WILMINGTON, DELAWARE 19898  
 US

This person is also inventor.

Telephone No.  
 302-774-2383

Faxsimile No.  
 302-773-0164

Teleprinter No.

State (that is, country) of nationality:  
 US

State (that is, country) of residence:  
 US

This person is applicant  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

**Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

GARCIA DURAN, Juan-Antonio  
 26 av. de L'Amandolier  
 CH-1208 Geneve  
 Switzerland

This person is:

applicant only

applicant and inventor

inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:  
 SP

State (that is, country) of residence:  
 CH

This person is applicant  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on a continuation sheet.

**Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

agent  common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Telephone No.  
 302-774-2383

KELLY, Patricia L.  
 E.I. DU PONT DE NEMOURS AND COMPANY  
 Legal Patent Records Center  
 1007 MARKET STREET  
 WILMINGTON, DELAWARE 19898  
 US

Faxsimile No.  
 302-773-0164

Teleprinter No.

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

## Continuation of Box No. III FURTHER APPLICANTS AND/OR (FURTHER) INVENTOR(S)

*If none of the following sub-boxes is used, this sheet is not to be included in the request.*

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

ROLLAND, Loic Pierre  
Residence Metna  
234 av. de la Grande  
Champagne  
F-01220 Divonne-les-Bains  
FR

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:  
FR

State (that is, country) of residence:  
FR

This person is applicant  all designated  all designated States except  the United States of America only  the States indicated in the Supplemental Box for the purposes of:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant  all designated  all designated States except  the United States of America only  the States indicated in the Supplemental Box for the purposes of:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant  all designated  all designated States except  the United States of America only  the States indicated in the Supplemental Box for the purposes of:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant  all designated  all designated States except  the United States of America only  the States indicated in the Supplemental Box for the purposes of:

Further applicants and/or (further) inventors are indicated on another continuation sheet.

## Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked)

## Regional Patent

AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT

EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT

EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT

OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

## National Patent (if other kind of protection or treatment desired, specify on dotted line):

<input type="checkbox"/> AL Albania	<input type="checkbox"/> LS Lesotho
<input type="checkbox"/> AM Armenia	<input type="checkbox"/> LT Lithuania
<input type="checkbox"/> AT Austria	<input type="checkbox"/> LU Luxembourg
<input checked="" type="checkbox"/> AU Australia	<input type="checkbox"/> LV Latvia
<input type="checkbox"/> AZ Azerbaijan	<input type="checkbox"/> MD Republic of Moldova
<input type="checkbox"/> BA Bosnia and Herzegovina	<input type="checkbox"/> MG Madagascar
<input type="checkbox"/> BB Barbados	<input type="checkbox"/> MK The former Yugoslav Republic of Macedonia
<input type="checkbox"/> BG Bulgaria	<input type="checkbox"/> MN Mongolia
<input checked="" type="checkbox"/> BR Brazil	<input type="checkbox"/> MW Malawi
<input type="checkbox"/> BY Belarus	<input type="checkbox"/> MX Mexico
<input checked="" type="checkbox"/> CA Canada	<input type="checkbox"/> NO Norway
<input type="checkbox"/> CH and LI Switzerland and Liechtenstein	<input type="checkbox"/> NZ New Zealand
<input type="checkbox"/> CN China	<input type="checkbox"/> PL Poland
<input type="checkbox"/> CU Cuba	<input type="checkbox"/> PT Portugal
<input checked="" type="checkbox"/> CZ Czech Republic	<input type="checkbox"/> RO Romania
<input type="checkbox"/> DE Germany	<input type="checkbox"/> RU Russian Federation
<input type="checkbox"/> DK Denmark	<input type="checkbox"/> SD Sudan
<input type="checkbox"/> EE Estonia	<input type="checkbox"/> SE Sweden
<input type="checkbox"/> ES Spain	<input checked="" type="checkbox"/> SG Singapore
<input type="checkbox"/> FI Finland	<input type="checkbox"/> SI Slovenia
<input type="checkbox"/> GB United Kingdom	<input type="checkbox"/> SK Slovakia
<input type="checkbox"/> GE Georgia	<input type="checkbox"/> SL Sierra Leone
<input type="checkbox"/> GH Ghana	<input type="checkbox"/> TJ Tajikistan
<input type="checkbox"/> GM Gambia	<input type="checkbox"/> TM Turkmenistan
<input type="checkbox"/> GW Guinea-Bissau	<input type="checkbox"/> TR Turkey
<input type="checkbox"/> HR Croatia	<input type="checkbox"/> TT Trinidad and Tobago
<input type="checkbox"/> HU Hungary	<input type="checkbox"/> UA Ukraine
<input type="checkbox"/> ID Indonesia	<input type="checkbox"/> UG Uganda
<input type="checkbox"/> IL Israel	<input checked="" type="checkbox"/> US United States of America
<input type="checkbox"/> IS Iceland	<input type="checkbox"/> UZ Uzbekistan
<input checked="" type="checkbox"/> JP Japan	<input type="checkbox"/> VN Viet Nam
<input type="checkbox"/> KE Kenya	<input type="checkbox"/> YU Yugoslavia
<input type="checkbox"/> KG Kyrgyzstan	<input type="checkbox"/> ZW Zimbabwe
<input type="checkbox"/> KP Democratic People's Republic of Korea	
<input checked="" type="checkbox"/> KR Republic of Korea	
<input type="checkbox"/> KZ Kazakhstan	
<input type="checkbox"/> LC Saint Lucia	
<input type="checkbox"/> LK Sri Lanka	
<input type="checkbox"/> LR Liberia	

Check-boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

.....  
 .....

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

## Box No. VI PRIORITY CLAIM

 Further priority claims are indicated in the Supplemental Box.

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 25 July 1997 (25.07.97)	97 20 2335.2	EP		
item (2)				
item (3)				

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA)  
(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA/JS

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year) Number Country (or regional Office)

## Box No. VIII CHECK LIST: LANGUAGE OF FILING

This international application contains the following number of sheets:

request : 4  
description (excluding sequence listing part) : 8  
claims : 2  
abstract : 1  
drawings : 0  
sequence listing part of description : \_\_\_\_\_  
Total number of sheets : 15

This international application is accompanied by the item(s) marked below:

1.  fee calculation sheet
2.  separate signed power of attorney
3.  copy of general power of attorney; reference number, if any:
4.  statement explaining lack of signature
5.  priority document(s) identified in Box No. VI as item(s): 1
6.  translation of international application into (language): \_\_\_\_\_
7.  separate indications concerning deposited microorganism or other biological material
8.  nucleotide and/or amino acid sequence listing in computer readable form
9.  other (specify): TRANSMITTAL LETTER

Figure of the drawings which should accompany the abstract:

Language of filing of the international application:

ENGLISH

## Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

E.I. DU PONT DE NEMOURS AND COMPANY

BY: *Miriam D. McConahey*  
MIRIAM D. MC CONNAHEY  
ASSISTANT SECRETARY-PATENT BOARD

Juan-Antonio Garcia Duran

Loic Pierre Rolland

For receiving Office use only		<p>2. Drawings:</p> <p><input type="checkbox"/> received:</p> <p><input type="checkbox"/> not received:</p>
1. Date of actual receipt of the purported international application:		
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:		
4. Date of timely receipt of the required corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent):	ISA/	
6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid		

For International Bureau use only	
Date of receipt of the record copy by the International Bureau:	

THE PRESENT Vice Chairman of the Patent Board: JAMES L. JERSILD, Vice Chairman of the Patent Board; W. E. I. DUPONT DE NEMOURS AND COMPANY, 1000 Market Street, Wilmington, Delaware 19898 U.S. ("DuPont"), hereby confirms that the authority to act on behalf of DuPont has been granted to the following individuals (as set forth in the attached excerpt from DuPont's Patent Practice Manual (Jan. 1988), Appendix Section III.A.4), including the Chairman, Vice-Chairman and those persons who are Assistant Secretaries of the Patent Board. Currently these Assistant Secretaries are:

Alanson G. Bowen, Jr.

Theodore C. Gregory

Miriam D. McConahey

The present Vice Chairman of the Patent Board is JAMES L. JERSILD.

In addition, the authority to act on behalf of DuPont before the competent International Authorities in connection with any and all international patent applications filed by it with the United States of America as Receiving Office to make or receive payments on its behalf is hereby granted to:

NAME	REG. #	NAME	REG. #	NAME	REG. #
JOH, Linda D.	33,719	GRIFFITHS, JOHN E.	32,647	MEDWICK, George M.	27,456
WEN Jr., Alanson G.	24,027	HAMBY, Jane O.	32,872	MORRISSEY, Bruce W.	30,663
WDER, Monte R.	36,761	HAMBY, William H.	31,521	MOYLES, Lisa J.	P-40,737
GESS, Richard H.	22,292	HEISER, David E.	31,366	SANTOPIETRO, Lois A.	36,264
RUSTENBURY, Lynne M.	30,971	HENDRICKSON, John S.	30,847	SCHAFFER, Andrew L.	33,605
TELLO, James A.	24,396	HIGGS, W. Victor	25,877	SHAFER, Robert J.	24,437
TCH, Gerald E.	30,457	JACONETTY, Kenneth E.	32,508	SHIPLEY, James E.	32,003
FFY, Roseanne R.	33,869	JERSILD, James L.	25,594	SIEGELL, Barbara C.	30,684
LL, John E.	20,822	KATZ, Elliott A.	26,396	STEVENSON, Robert B.	26,039
REN, Barry	26,452	KELLY, Patricia L.	39,247	STRICKLAND, Frederick D.	39,041
NS, Craig H.	31,825	KING, Karen K.	34,850	SULLIVAN, Daniel W.	34,937
TD, Linda Axamethy	33,692	KLOCKO III, John J.	24,059	SUTHERLAND, Hoge T.	20,010
STNER, James A.	24,259	KRUKIEL, Charles E.	27,344	TESSARI, Joseph A.	32,177
KK, George A.	27,636	LEVITT, Cary A.	31,848	TOCKER, Edwin	20,341
KE, Hilmar L.	22,384	MAGEE, Thomas H.	27,355	TOWLER III, Oscar A.	33,803
AN, Andrew G.	25,293	MAJARIAN, William R.	P41,173	TULLOCH, Rebecca W.	36,297
AN, Thomas W.	31,959	MALINOWSKI, Andrea V.	33,012	WALKER, P. Michael	32,602
LD, David J.	25,338	MAYER, Nancy S.	29,190	YUN, Caroline J.	34,952
CGORY, Theodore C.	25,243	McGEE, Patricia	37,391		

The undersigned ratifies fully all actions already taken by the above-named individuals in accordance with authority granted hereby.

E. I. DU PONT DE NEMOURS AND COMPANY

By:

  
JAMES L. JERSILD, Vice Chairman of the Patent Board

Date:

7/27/88

**PCT**  
**FEES CALCULATION SHEET**  
**Annex to the Request**

For receiving Office use only

International application No.

Date stamp of the receiving Office

Applicant's or agent's  
file reference

AD6516

Applicant

E.I. DU PONT DE NEMOURS AND COMPANY

**CALCULATION OF PRESCRIBED FEES**

1. TRANSMITTAL FEE ..... 240.00  T

2. SEARCH FEE ..... 1,250.00  S

International search to be carried out by ISA/US

(If two or more International Searching Authorities are competent in relation to the international application, indicate the name of the Authority which is chosen to carry out the international search.)

3. INTERNATIONAL FEE

**Basic Fee**

The international application contains 15 sheets.

first 30 sheets ..... 455.00  b<sub>1</sub>

0 x additional amount = 0.00  b<sub>2</sub>

Add amounts entered at b<sub>1</sub> and b<sub>2</sub> and enter total at B ..... 455.00  B

**Designation Fees**

The international application contains 9 designations.

9 x 105.00 = 945.00  D

number of designation fees amount of designation fee  
payable (maximum 11).

Add amounts entered at B and D and enter total at I ..... 1,400.00  I

(Applicants from certain States are entitled to a reduction of 75% of the international fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 25% of the sum of the amounts entered at B and D.

4. FEE FOR PRIORITY DOCUMENT (if applicable) .....  P

5. TOTAL FEES PAYABLE

Add amounts entered at T, S, I and P, and enter total in the TOTAL box

2,890.00

**TOTAL**

The designation fees are not paid at this time.

**MODE OF PAYMENT**

authorization to charge  
deposit account (see below)

bank draft

coupons

cheque

cash

other (specify):

postal money order

revenue stamps

**DEPOSIT ACCOUNT AUTHORIZATION** (this mode of payment may not be available at all receiving Offices)

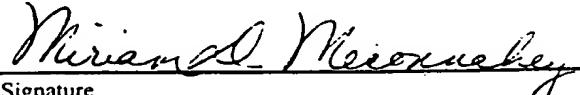
The RO/ US  is hereby authorized to charge the total fees indicated above to my deposit account.

is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account.

is hereby authorized to charge the fee for preparation and transmittal of the priority document to the International Bureau of WIPO to my deposit account.

04-1930

23 JULY 1998



Deposit Account Number

Date (day/month/year)

Signature



Europäisches  
Patentamt

European  
Patent Office

Office européen  
des brevets

Bescheinigung

Certificate

Attestation

Die angehefteten Unterlagen stimmen mit der ursprünglich eingereichten Fassung der auf dem nächsten Blatt bezeichneten europäischen Patentanmeldung überein.

The attached documents are exact copies of the European patent application described on the following page, as originally filed.

Les documents fixés à cette attestation sont conformes à la version initialement déposée de la demande de brevet européen spécifiée à la page suivante.

Patentanmeldung Nr. Patent application No. Demande de brevet n°

97202335.2

Der Präsident des Europäischen Patentamts:  
Im Auftrag

For the President of the European Patent Office

Le Président de l'Office européen des brevets  
p.o.

W.G.F. VAN ROOSMALEN

DEN HAAG, DEN  
THE HAGUE,  
LA HAYE, LE

24/11/97

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/15229

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :C08L 51/06; C08K 3/00, 3/26, 3/32  
US CL :524/504, 524, 531, 400, 416, 425, 444, 445, 451

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 524/504, 524, 531, 400, 416, 425, 444, 445, 451

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,877,841 A (MORIYA et al.) 31 October 1989, column 3, lines 25-55; column 4, lines 32-46; column 5, lines 33-47; column 6, lines 5-22, 35-43.	1-6
Y	US 4,983,665 A (BACKDERF) 08 January 1991, column 1, lines 45-51; column 2, lines 27-54; column 5, lines 24-25, 33, 53-57; column 8, lines 11-13.	1-6
Y	US 5,189,091 A (LAUGHNER) 23 February 1993, column 1, lines 49-53; column 6, lines 48-53; column 7, lines 6-9, 16, 40-52; column 8, lines 15-17, 42-47; column 13, lines 60-68; column 15-16; column 17, lines 13-22, line 60 to column 18, line 57.	1-6



Further documents are listed in the continuation of Box C.



See patent family annex.

•	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

09 OCTOBER 1998

Date of mailing of the international search report

30 OCT 1998

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer  
  
MARK WARZEL

Telephone No. (703) 308-0661

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/15229

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,276,082 A (FORRY et al.) 04 January 1994, column 2, lines 35-64; column 3, lines 14-63; column 6, line 62 to column 7, line 7, 36-37, 49, 54-60; column 8, lines 6-7, 21-29, 40-42; column 9, lines 55-68; column 11, lines 28-34.	1-6
Y	US 5,424,362 A (HWANG et al.) 13 June 1995, column 2, lines 13-53; column 3, lines 15-46; column 4, lines 29-35, 45-47; column 5, lines 15-24; column 6, lines 7-18, 46-55.	1-6

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/15229

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

APS File USPAT:

S ETHYLENE  
S VINYL ACETATE  
S CARBON MONOXIDE  
S L1(4A)L2(4A)L3  
S TERPOLYMER# OR COPOLYMER#  
S L4(10A)L5  
S GRAFT##  
S POLYOLEFIN#  
S L1(4A)L2  
S (L9 OR L8)(8A)L7  
S L6 AND L10  
S 525/71,73,78,80/CCLST OR 524/504,524,531,400,416,425,444,445,451/CCLST  
S L12 AND L11  
S L11 NOT L13